

What is claimed is:

1 1. A speaker system for attachment to an inner surface of a
2 helmet, said speaker system comprising a piezoelectric film speaker
3 functioning as a main surface, oscillating in response to an input signal
4 and having a peripheral edge thereof supported by a frame having a
5 center opening. .

1 2. The speaker system of claim 1, wherein the frame supports
2 the piezoelectric film speaker in a curved state.

1 3. The speaker system of claim 1, wherein the frame is
2 constituted by a pair of joined frame pieces, and the piezoelectric film
3 speaker has a peripheral edge held by the pair of frame pieces.

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1 4. A helmet including the speaker system defined in claim 1,
2 said speaker system being fixedly attached on an inner surface of a shell
3 of said helmet.

1 5. The helmet of claim 4, wherein the speaker system is fixedly
2 attached on the inner surface of the helmet shell using a detachable
3 fastener.

1 6. A piezoelectric speaker comprising:
2 a frame having an opening therein;
3 a piezoelectric film located on one side of said frame and covering
4 said opening;
5 a laminating film attached to said one side of said frame and
6 covering said piezoelectric film; and
7 a fastener secured to said laminating film for fastening said
8 piezoelectric speaker to an inner surface of a helmet.

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Sub A 7. The piezoelectric speaker according to claim 6, wherein said
frame is substantially rectangular.

8. The piezoelectric speaker according to claim 7, wherein said
frame has a length dimension and width dimension, said length dimension
being larger than said width dimension, and wherein said frame is curved
along said length dimension.

Sub A3 9. The piezoelectric speaker according to claim 8, wherein a
curvature of said frame has a radius of curvature in a range of 210mm to
360mm.

10. The piezoelectric speaker according to claim 6, wherein said
fastener is a hook-and-loop fastener.

11. A helmet including the piezoelectric speaker defined in claim 6,
said piezoelectric speaker being fixedly attached on an inner surface of a
shell of said helmet.

12. A piezoelectric speaker comprising:
a first frame member having a plurality of claws extending therefrom;
a second frame member having an opening therein and a plurality of
recesses therein for receiving said plurality claws to affix said first frame to
said second frame;
a piezoelectric film located between said first frame member and said
second frame member and covering said opening; and
a fastener secured to said first frame member for fastening said
piezoelectric speaker to an inner surface of a helmet

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1 13. The piezoelectric speaker according to claim 12, wherein said
2 fastener is a hook-and-loop fastener.

1 14. The piezoelectric speaker according to claim 12, said first frame
2 including a film-receiving recess for receiving said piezoelectric film therein.

1 15. The piezoelectric speaker according to claim 12, wherein said
2 frame is substantially rectangular.

1 16. A helmet including the piezoelectric speaker defined in claim 12,
2 said piezoelectric speaker being fixedly attached on an inner surface of a
3 shell of said helmet.

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